



Colorado Department
of Public Health
and Environment

**COLORADO DISCHARGE PERMIT SYSTEM (CDPS)
FACT SHEET FOR PERMIT NUMBER CO0040959
TOWN OF HAYDEN TOWN OF HAYDEN
WASTEWATER TREATMENT FACILITY
ROUTT COUNTY**

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I. TYPE OF PERMIT

A. Permit Type: Domestic - Minor Municipal, Lagoon System, Fifth Renewal

B. Discharge To: Surface Water

II. FACILITY INFORMATION

A. SIC Code: 4952 Sewerage Systems

B. Facility Location: Latitude: 40.498056 °N, Longitude: 107.274722° W

C. Permitted Feature: 001A and 001B, following disinfection and prior to mixing with the receiving stream. Current outfall to Dry Creek. 40.492981°N, 107.272997°W
003A, following disinfection and prior to mixing with the receiving stream. Proposed new outfall to the Yampa River. 40.497594°N, 107.273158°W

The location(s) provided above will serve as the point(s) of compliance for this permit and are appropriate as they are located after all treatment and prior to discharge to the receiving water.

D. Facility Flows: 0.75 MGD

E. Major Changes From Last Renewal:

- As a result of the WQCC Hearing Regulation No. 33 *Classifications and Numeric Standards for Upper Colorado River Basin and North Platte River (Planning Region 12)* which was promulgated August 11, 2014. Both the Yampa River and Dry Creek were resegmented. The

Yampa River segment changed from COUCYA02c to COUCYA02b. The Dry Creek segment changed from COUCYA13d to COUCYA13h.

- New, more stringent ammonia limits have been developed for outfall 001A/B (Dry Creek) and a compliance schedule has been revised to the permit to allow additional time for the planned construction.
- Potentially dissolved selenium limits have been added to the permit based on the RP analysis and the Regulation 93 303(d) listing for dissolved selenium on Dry Creek.
- Total recoverable iron monitoring requirements have been added to the permit based on the Regulation 93 303(d) listing for total recoverable iron on Dry Creek.
- Permitted feature 002A used for land application of discharge effluent has been removed as an outfall at this facility. The permittee should obtain an alternate method of coverage for this land application (Regulation No. 84 Notice of Authorization or a groundwater discharge permit).

III. RECEIVING STREAM

A. Waterbody Identification: *COUCYA13h, Dry Creek*
COUCYA02b, the Yampa River

B. Water Quality Assessment:

An assessment of the stream standards, low flow data, and ambient stream data has been performed to determine the assimilative capacities for *the Yampa River* for potential pollutants of concern. This information, which is contained in the Water Quality Assessment (WQA) for this receiving stream(s), also includes an antidegradation review, where appropriate. The Division's Permits Section has reviewed the assimilative capacities to determine the appropriate water quality-based effluent limitations as well as potential limits based on the antidegradation evaluation, where applicable. The limitations based on the assessment and other evaluations conducted as part of this fact sheet can be found in Part I.A of the permit.

Permitted Feature 001A, 001B, and 003A will be the authorized discharge points to the receiving stream.

IV. FACILITY DESCRIPTION

A. Infiltration/Inflow (I/I)

No infiltration/inflow problems have been documented in the service area.

B. Lift Stations

Table IV-1 summarizes the information provided in the renewal application for the lift stations in the service area.

Table IV-1 – Lift Station Summary

| Station Name/# | Firm Pump Capacity (gpm) | Peak Flows (gpd) | % Capacity (based on peak flow) |
|-------------------|--------------------------|------------------|---------------------------------|
| Washington Street | 2 pumps @ 300 | 150000 | 17.4 % |

| | | | |
|---------------------------|--------------------------|--------|--------|
| | gpm, 3 HP | | |
| YVRA | 2 pumps @ 155 gpm, 20 HP | 2000 | 0.4 % |
| Dry Creek Village | 2 pumps @ 176 gpm, 15 HP | 35000 | 6.9 % |
| Precision | 2 pumps @ 100 gpm, 5 HP | 1000 | 0.3 % |
| Wastewater Plant Influent | 2 pumps @ 760 gpm, 10 HP | 300000 | 13.7 % |

C. Chemical Usage

The permittee stated in the application that they utilize four chemicals in their treatment process. The MSDS sheets have been reviewed and the following chemicals have been approved for use and are summarized in the following table.

Table IV-2 – Chemical Additives

| Chemical Name | Purpose | Constituents of Concern |
|-----------------------|-----------------------|---------------------------|
| <i>Chlorine</i> | <i>Disinfection</i> | <i>Chlorine</i> |
| <i>Sulfur Dioxide</i> | <i>Dechlorination</i> | <i>Sulfur Dioxide, pH</i> |

Chemicals deemed acceptable for use in waters that will or may be discharged to waters of the State are acceptable only when used in accordance with all state and federal regulations, and in strict accordance with the manufacturer's site-specific instructions.

D. Treatment Facility, Facility Modifications and Capacities

The facility consists of two aerated lagoons, one polishing pond, and a chlorine contact basin. Additionally the facility is equipped to use discharge effluent for onsite irrigation and land application. The permittee has not performed any construction at this facility that would change the hydraulic capacity of 0.75 MGD or the organic capacity of 1502 lbs BOD₅/day, which were specified in Site Approval 3608. That document should be referred to for any additional information.

The facility is proposing to undergo changes and improvements that would not alter the hydraulic or organic capacity. The upgraded facility would consist of the same treatment process as above. However a proposed new discharge outfall 003A will be constructed to allow the facility to discharge directly to the Yampa River.

E. Sludge Treatment and Disposal

Since the treatment facility consists of aerated lagoons, sludge removal will probably be infrequent (once every 5 to 10 years) and only take place if the ponds are drained and cleaned. If sludge is

removed from the lagoons for any reason, it must be disposed of in accordance with local, State and Federal regulations.

1. EPA General Permit

EPA Region 8 issued a General Permit (effective October 19, 2007) for Colorado facilities whose operations generate, treat, and/or use/dispose of sewage sludge by means of land application, landfill, and surface disposal under the National Pollutant Discharge Elimination System. All Colorado facilities are required to apply for and to obtain coverage under the EPA General Permit.

2. Biosolids Regulation (Regulation No. 64, Colorado Water Quality Control Commission)

While the EPA is now the issuing agency for biosolids permits, Colorado facilities that land apply biosolids must comply with requirements of Regulation No. 64, such as the submission of annual reports as discussed later in this rationale.

V. PERFORMANCE HISTORY

A. Monitoring Data

1. Discharge Monitoring Reports – The following tables summarize the effluent data reported on the Discharge Monitoring Reports (DMRs) for the previous permit term, from May 2009 through October 2014.

Table V-1 – Summary of DMR Data for Permitted Feature 001A

| <i>Parameter</i> | <i># Samples or Reporting Periods</i> | <i>Reported Average Concentrations Avg/Min/Max</i> | <i>Reported Maximum Concentrations Avg/Min/Max</i> | <i>Previous Avg/Max/AD Permit Limit</i> | <i>Number of Limit Excursions</i> |
|---------------------------------|---|--|--|---|---|
| <i>Effluent Flow (MGD)</i> | 40 | 0.18/0.08/0.41 | 0.27/0.1/0.63 | 0.25/Report | 3 |
| <i>pH (su)</i> | 40 | 7.2/6.5/8.1 | 7.9/7.3/9.1 | 6.5 - 9 | |
| <i>E. coli (#/100 ml)</i> | 13 | 1.5/1/10 | 1.9/1/40 | 126/252 | |
| <i>TRC (mg/l)</i> | 10 | 0.005/0/0.05 | 0.005/0/0.05 | 0.011/0.019 | 2 |
| <i>NH3 as N, Tot (mg/l) Jan</i> | 5 | 41/21/94 | 48/23/105 | Report/Report | |
| <i>NH3 as N, Tot (mg/l) Feb</i> | 5 | 50/21/115 | 54/26/119 | Report/Report | |
| <i>NH3 as N, Tot (mg/l) Mar</i> | 4 | 72/22/172 | 104/28/278 | Report/Report | |
| <i>NH3 as N, Tot (mg/l) Apr</i> | 4 | 107/18/313 | 122/23/362 | Report/Report | |
| <i>NH3 as N, Tot (mg/l) May</i> | 6 | 66/10/257 | 79/13/319 | Report/Report | |
| <i>NH3 as N, Tot (mg/l) Jun</i> | 2 | 134/76/192 | 147/78/215 | Report/Report | |
| <i>NH3 as N, Tot (mg/l) Jul</i> | 1 | 99/99/99 | 105/105/105 | Report/Report | |
| <i>NH3 as N, Tot (mg/l) Aug</i> | 1 | 87/87/87 | 95/95/95 | Report/Report | |
| <i>NH3 as N, Tot (mg/l) Sep</i> | 1 | 125/125/125 | 142/142/142 | Report/Report | |
| <i>NH3 as N, Tot (mg/l) Oct</i> | 1 | 143/143/143 | 147/147/147 | Report/Report | |
| <i>NH3 as N, Tot (mg/l) Nov</i> | 5 | 35/7/133 | 38/8.3/138 | 22.6/Report | 1 |
| <i>NH3 as N, Tot (mg/l) Dec</i> | 5 | 39/12/132 | 42/16/140 | 30.5/Report | 1 |
| <i>BOD5, effluent (mg/l)</i> | 40 | 14/-7.5/33 | 20/-4.74/49 | 30/45/ | |
| <i>BOD5 (% removal)</i> | 41 | 93/81/105 | NA/NA/NA | 85/85/ | 8 |
| <i>TSS, effluent (mg/l)</i> | 40 | 12/0.83/42 | 12/0.83/42 | 75/110/ | |
| <i>Oil and Grease (mg/l)</i> | 40 | NA/NA/NA | 0/0/0 | NA/10/ | |
| <i>TDS (mg/l)</i> | | // | // | Report/Report/ | |

| | | | | |
|---|----|--------------|--------------|---------------|
| PWS intake (mg/l) | 13 | 332/48/2097 | 333/48/2097 | Report |
| WWTF effluent (mg/l) | 13 | 502/421/805 | 504/421/805 | Report |
| Se, Dis (µg/l) | 12 | 1.4/0.0008/5 | 1.4/0.0008/5 | Report/Report |
| *The pH data shows the minimum reported values in the "average" column, and the maximum reported values in the "maximum column" | | | | |

Table V-2 – Summary of DMR Data for Permitted Feature 001B

| Parameter | # Samples or Reporting Periods | Reported Average Concentrations Avg/Min/Max | Reported Maximum Concentrations Avg/Min/Max | Previous Avg/Max/AD Permit Limit | Number of Limit Excursions |
|---|--|---|--|--|----------------------------------|
| Effluent Flow (MGD) | 2 | 0.22/0.19/0.26 | 0.3/0.25/0.36 | 0.75/Report | 1 |
| pH (su) | 2 | 7.3/7.2/7.5 | 8/7.8/8.2 | 6.5-9 | |
| E. coli (#/100 ml) | 2 | 1.3/1/1.8 | 6.3/1/40 | 126/252 | |
| TRC (mg/l) | 0 | NA/NA/NA | NA/NA/NA | 0.011/0.019 | |
| NH3 as N, Tot (mg/l) Jan | 0 | NA/NA/NA | NA/NA/NA | 23.6/Report | |
| NH3 as N, Tot (mg/l) Feb | 0 | NA/NA/NA | NA/NA/NA | 29/Report | |
| NH3 as N, Tot (mg/l) Mar | 1 | 28/28/28 | 30/30/30 | 29/Report | |
| NH3 as N, Tot (mg/l) Apr | 1 | 19/19/19 | 27/27/27 | 29/Report | |
| NH3 as N, Tot (mg/l) May | 0 | NA/NA/NA | NA/NA/NA | Report/Report | |
| NH3 as N, Tot (mg/l) Jun | 0 | NA/NA/NA | NA/NA/NA | Report/Report | |
| NH3 as N, Tot (mg/l) Jul | 0 | NA/NA/NA | NA/NA/NA | Report/Report | |
| NH3 as N, Tot (mg/l) Aug | 0 | NA/NA/NA | NA/NA/NA | Report/Report | |
| NH3 as N, Tot (mg/l) Sep | 0 | NA/NA/NA | NA/NA/NA | Report/Report | |
| NH3 as N, Tot (mg/l) Oct | 0 | NA/NA/NA | NA/NA/NA | Report/Report | |
| NH3 as N, Tot (mg/l) Nov | 0 | NA/NA/NA | NA/NA/NA | 22.6/Report | |
| NH3 as N, Tot (mg/l) Dec | 0 | NA/NA/NA | NA/NA/NA | 30.5/Report | |
| BOD5, effluent (mg/l) | 2 | 16/13/18 | 26/23/29 | 30/45/ | |
| BOD5 (% removal) | 2 | 88/84/92 | NA/NA/NA | 85/85/ | |
| TSS (mg/l) | 2 | 8.5/7.3/9.7 | 8.5/7.3/9.7 | 75/110/ | |
| TSS, effluent (mg/l) | 2 | 8.5/7.3/9.7 | 8.5/7.3/9.7 | 75/110/ | |
| Oil and Grease (mg/l) | 2 | NA/NA/NA | 0/0/0 | NA/10/ | |
| TDS (mg/l) | | // | // | Report/Report/ | |
| PWS intake (mg/l) | 2 | 208/191/224 | 269/232/305 | Report | |
| WWTF effluent (mg/l) | 2 | 517/471/562 | 576/506/646 | Report | |
| Se, Dis (µg/l) | 2 | 1.2/0.8/1.6 | 1.2/0.8/1.6 | Report/Report | |
| *The pH data shows the minimum reported values in the "average" column, and the maximum reported values in the "maximum column" | | | | | |

B. Compliance With Terms and Conditions of Previous Permit

1. Effluent Limitations – The data shown in the preceding table(s) indicate apparent violations of the permit. There have been 9 violations of BOD₅ percent removal since the previous permit issuance in 2009. Additionally there have been 2 exceedances for TRC, 3 exceedances for flow, and 2 exceedances for ammonia since 2009. Division has issued several compliance advisories to the Town of Hayden regarding these violations.

In accordance with 40 CFR Part 122.41(a), any permit noncompliance constitutes a violation of the

Clean Water Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or denial of a permit renewal application.

2. Other Permit Requirements – The permittee has been in compliance with all other aspects of the previous permit.

VI. DISCUSSION OF EFFLUENT LIMITATIONS

A. Regulatory Basis for Limitations

1. Technology Based Limitations
 - a. Federal Effluent Limitation Guidelines – The Federal Effluent Limitation Guidelines for domestic wastewater treatment facilities are the secondary treatment standards. These standards have been adopted into, and are applied out of, Regulation 62, the Regulations for Effluent Limitations.
 - b. Regulation 62: Regulations for Effluent Limitations – These Regulations include effluent limitations that apply to all discharges of wastewater to State waters and are shown in Section VIII of the WQA. These regulations are applicable to the discharge from the Town of Hayden WWTF.
2. Numeric Water Quality Standards - The WQA contains the evaluation of pollutants limited by water quality standards. The mass balance equation shown in Section VI of the WQA was used for most pollutants to calculate the potential water quality based effluent limitations (WQBELs), M_2 , that could be discharged without causing the water quality standard to be violated. For ammonia, the AMMTOX Model was used to determine the maximum assimilative capacity of the receiving stream. A detailed discussion of the calculations for the maximum allowable concentrations for the relevant parameters of concern is provided in Section VI of the Water Quality Assessment developed for this permitting action.

The maximum allowable pollutant concentrations determined as part of these calculations represent the calculated effluent limits that would be protective of water quality. These are also known as the water quality-based effluent limits (WQBELs). Both acute and chronic WQBELs may be calculated based on acute and chronic standards, and these may be applied as daily maximum (acute) or 30-day average (chronic) limits.

3. Narrative Water Quality Standards - Section 31.11(1)(a)(iv) of The Basic Standards and Methodologies for Surface Waters (Regulation No. 31) includes the narrative standard that State surface waters shall be free of substances that are harmful to the beneficial uses or toxic to humans, animals, plants, or aquatic life.
 - a. Whole Effluent Toxicity - The Water Quality Control Division has established the use of WET testing as a method for identifying and controlling toxic discharges from wastewater treatment facilities. WET testing is being utilized as a means to ensure that there are no discharges of pollutants "in amounts, concentrations or combinations which are harmful to the beneficial uses or toxic to humans, animals, plants, or aquatic life" as required by Section 31.11 (1) of the Basic Standards and Methodologies for Surface Waters. The requirements for WET testing are being implemented in accordance with Division policy, Implementation of the Narrative Standard for

Toxicity in Discharge Permits Using Whole Effluent Toxicity (Sept 30, 2010). Note that this policy has recently been updated and the permittee should refer to this document for additional information regarding WET.

4. Water Quality Regulations, Policies, and Guidance Documents

- a. Antidegradation - Since the receiving water is Undesignated, an antidegradation review is required pursuant to Section 31.8 of The Basic Standards and Methodologies for Surface Water. As set forth in Section VII of the WQA, an antidegradation evaluation was conducted for pollutants when water quality impacts occurred and when the impacts were significant. Based on the antidegradation requirements and the reasonable potential analysis discussed below, antidegradation-based average concentrations (ADBACs) may be applied.

According to Division procedures, the facility has three options related to antidegradation-based effluent limits: (1) the facility may accept ADBACs as permit limits (see Section VII of the WQA); (2) the facility may select permit limits based on their non-impact limit (NIL), which would result in the facility not being subject to an antidegradation review and thus the antidegradation-based average concentrations would not apply (the NILs are also contained in Section VII of the WQA); or (3) the facility may complete an alternatives analysis as set forth in Section 31.8(3)(d) of the regulations which would result in alternative antidegradation-based effluent limitations.

The effluent must not cause or contribute to an exceedance of a water quality standard and therefore the WQBEL must be selected if it is lower than the NIL. Where the WQBEL is not the most restrictive, the discharger may choose between the NIL or the ADBAC: the NIL results in no increased water quality impact; the ADBAC results in an “insignificant” increase in water quality impact. The ADBAC limits are imposed as two-year average limits.

- b. Antibacksliding – As the receiving water, Dry Creek, is designated Use-Protected, the antibacksliding requirements in Regulation 61.10 have been met.

As the receiving water, The Yampa River, is designated Reviewable, and the Division has performed an antidegradation evaluation, in accordance with the Antidegradation Guidance, the antibacksliding requirements in Regulation 61.10 have been met.

- c. Determination of Total Maximum Daily Loads (TMDLs) – The receiving stream, Dry Creek, to which the Town of Hayden WWTF discharges is currently listed on the State’s 303(d) list for development of TMDLs for total recoverable iron and potentially dissolved selenium. However, the TMDL has not yet been finalized. Consistent with Division practice, this permit establishes monitoring requirements for these pollutants until such time as the TMDLs is complete and waste load allocations have been determined. The permit may be reopened to include limitations based upon a finalized TMDL.
- d. Colorado Mixing Zone Regulations – Pursuant to section 31.10 of The Basic Standards and Methodologies for Surface Water, a mixing zone determination is required for this permitting action. The Colorado Mixing Zone Implementation Guidance, dated April 2002, identifies the process for determining the meaningful limit on the area impacted by a discharge to surface water where standards may be exceeded (i.e., regulatory mixing zone). This guidance document provides for certain exclusions from further analysis under the regulation, based on site-specific

conditions.

The guidance document provides a mandatory, stepwise decision-making process for determining if the permit limits will not be affected by this regulation. Exclusion, based on Extreme Mixing Ratios, may be granted if the ratio of the facility design flow to the chronic low flow (30E3) is greater than 2:1 or if the ratio of the chronic low flow to the design flow is greater than 20:1. Since the ratio of the chronic low flow to the design flow is 85:1 the permittee is eligible for an exclusion from further analysis under the regulation.

- e. Salinity Regulations – In compliance with the Colorado River Salinity Standards and the Colorado Discharge Permit System Regulations, the permittee shall monitor for total dissolved solids on a **Quarterly** basis. Samples shall be taken at Permitted Feature 001A, 001B, and 003A.

The average concentration discharged is less than 500 mg/l, and therefore the facility is exempt from further requirements other than monitoring for TDS.

- f. Reasonable Potential Analysis – Using the assimilative capacities contained in the WQA, an analysis must be performed to determine whether to include the calculated assimilative capacities as WQBELs in the permit. This reasonable potential (RP) analysis is based on the Determination of the Requirement to Include Water Quality Standards-Based Limits in CDPS Permits Based on Reasonable Potential, dated December, 2002. This guidance document utilizes both quantitative and qualitative approaches to establish RP depending on the amount of available data.

A qualitative determination of RP may be made where ancillary and/or additional treatment technologies are employed to reduce the concentrations of certain pollutants. Because it may be anticipated that the limits for a parameter could not be met without treatment, and the treatment is not coincidental to the movement of water through the facility, limits may be included to assure that treatment is maintained.

A qualitative RP determination may also be made where a federal ELG exists for a parameter, and where the results of a quantitative analysis results in no RP. As the federal ELG is typically less stringent than a limitation based on the WQBELs, if the discharge was to contain concentrations at the ELG (above the WQBEL), the discharge may cause or contribute to an exceedance of a water quality standard.

To conduct a quantitative RP analysis, a minimum of 10 effluent data points from the previous 5 years, should be used. The equations set out in the guidance for normal and lognormal distribution, where applicable, are used to calculate the maximum estimated pollutant concentration (MEPC). For data sets with non-detect values, and where at least 30% of the data set was greater than the detection level, MDLWIN software is used consistent with Division guidance to generate the mean and standard deviation, which are then used to establish the multipliers used to calculate the MEPC. If the MDLWIN program cannot be used the Division's guidance prescribes the use of best professional judgment.

For some parameters, recent effluent data or an appropriate number of data points may not be available, or collected data may be in the wrong form (dissolved vs total) and therefore may not be available for use in conducting an RP analysis. Thus, consistent with Division procedures, monitoring will be required to collect samples to support a RP analysis and subsequent decisions

for a numeric limit. A compliance schedule may be added to the permit to require the request of an RP analysis once the appropriate data have been collected.

For other parameters, effluent data may be available to conduct a quantitative analysis, and therefore an RP analysis will be conducted to determine if there is RP for the effluent discharge to cause or contribute to exceedances of ambient water quality standards. The guidance specifies that if the MEPC exceeds the maximum allowable pollutant concentration (MAPC), limits must be established and where the MEPC is greater than half the MAPC (but less than the MAPC), monitoring must be established. Table VI-1 contains the calculated MEPC compared to the corresponding MAPC, and the results of the reasonable potential evaluation, for those parameters that met the data requirements. The RP determination is discussed for each parameter in the text below.

Table VI-1 – Quantitative Reasonable Potential Analysis

| Parameter | 30-Day Average | | | 7-Day Ave or Daily Max | | |
|----------------|----------------|--------------|----------------------|------------------------|--------------|----------------------|
| | MEPC | WQBEL (MAPC) | Reasonable Potential | MEPC | WQBEL (MAPC) | Reasonable Potential |
| Se, Dis (µg/l) | 14 | 4.6 | Yes | 14 | 18 | Monitor |

B. Parameter Evaluation

BOD₅ - The BOD₅ concentrations in Reg 62 are the most stringent effluent limits and are therefore applied. The removal percentages for BOD₅ also apply based on the Regulations for Effluent Limitations. These limitations are the same as those contained in the previous permit and are imposed upon the effective date of this permit.

Total Suspended Solids - The TSS concentrations in Reg 62 are the most stringent effluent limits and are therefore applied. These limitations are the same as those contained in the previous permit and are imposed upon the effective date of this permit.

Oil and Grease – The oil and grease limitations from the Regulations for Effluent Limitations are applied as they are the most stringent limitations. This limitation is the same as those contained in the previous permit and is imposed upon the effective date of this permit.

pH - This parameter is limited by the water quality standards of 6.5-9.0 s.u., as this range is more stringent than other applicable standards. This limitation is the same as that contained in the previous permit and is imposed upon the effective date of this permit.

E. Coli –

Dry Creek: The limitation for E. Coli is based upon the WQBEL as described in the WQA. A qualitative determination of RP has been made as the treatment facility has been designed to treat specifically for this parameter.

Yampa River: The calculated E. Coli WQBEL in the WQA is greater than that allowed by the Division

procedure for E. coli, which specifies a maximum of 2,000 organisms per 100 ml (30-day geometric mean) and 4,000 organisms per 100 ml (7-day geometric mean).

Previous monitoring as shown in Table V-1 indicate that these limitations can be met and is therefore imposed upon the effective date of the permit

Total Residual Chlorine (TRC) -

Dry Creek: The limitation for TRC is based upon the WQBEL as described in the WQA A qualitative determination of RP has been made as chlorine may be used in the treatment process.

Yampa River: The calculated effluent limit for TRC is greater than the 0.5 mg/l daily maximum limit that is allowed by the State Regulations for Effluent Limitations, and therefore the 0.5 mg/l limit has been added to the permit.

Previous monitoring as shown in Table V-1 indicate that these limitations can be met and is therefore imposed upon the effective date of the permit.

Total Inorganic Nitrogen –

Yampa River: A qualitative determination of no RP was made for total inorganic nitrogen as, the calculated WQBEL for T.I.N. of 513 mg/l is much higher than what would be expected in the discharge.

Ammonia –

Dry Creek: The limitation for ammonia is based upon the WQBEL as described in the WQA. A qualitative determination of RP has been made as the treatment facility has been designed to treat specifically for this parameter.

This limitation is more stringent than the previous limit and, the permittee may not be able to consistently meet this limitation and the existing compliance schedule for ammonia has been revised in the permit to give the permittee additional time to meet ammonia limitations. Interim limits have been added to the permit for the discharge to Dry Creek.

Yampa River: The limitation for ammonia is based upon both the WQBELs and the NILs as described in the WQA. A qualitative determination of RP has been made as the treatment facility has been designed to treat specifically for this parameter.

Due to the large amount of dilution in the Yampa River and that the treatment facility has been designed to treat specifically for this parameter, and because this outfall is not yet constructed (or discharging), it is expected that the permittee can meet the limitations, and therefore the limitation is imposed upon the completion of construction of the new outfall 003A by 12/31/2015.

Metals – The effluent is not expected or known to contain high metals concentrations as it is a domestic minor facility. Therefore, monitoring and limitations for metals are not needed in this permit with the exceptions of total recoverable iron and potentially dissolved selenium due to the Regulation 93 303(d) listings on Dry Creek.

Total Recoverable Iron – There were no data available to perform a RP analysis for total recoverable

iron. Due to the Regulation 93 303(d) listing of total recoverable iron on Dry Creek, this parameter has been added to the permit with a report only condition for the collection of data for a RP analysis.

Potentially Dissolved Selenium – The RP analysis for potentially dissolved selenium was based upon the WQBEL as described in the WQA. With the available data the log-normal program was used to determine the appropriate statistics to determine the MEPC. The MEPC was greater than the MAPC and therefore limitations are required due to the Regulation 93 303(d) listing of potentially dissolved selenium on Dry Creek. Therefore, a 30-day average and daily maximum requirements have been added to the permit. With the exception of one outlier, previous monitoring as shown in Table V-1 indicate that this limitation can be met and is therefore imposed upon the effective date of the permit.

Temperature- Based on the information presented in the WQA, this facility is exempt from the temperature requirements based on the zero low flow condition for dry creek and flow ratio's for the Yampa River.

Organics – The effluent is not expected or known to contain organic chemicals, and therefore, limitations for organic chemicals are not needed in this permit.

Whole Effluent Toxicity (WET) Testing – WET testing is not required as this is a domestic minor facility with a design flow of 0.75 MGD.

Due to the above statements, and in accordance with Section 61.8(2)(b)(i)(B) of the Colorado Discharge Permit System Regulations, the discharge does not have the reasonable potential to cause, or measurably contribute to, an excursion above any narrative standards for water quality. Therefore, WET testing is not a requirement of this permit. However, the Division reserves the right to reopen the permit to include WET testing, should facility conditions change or if new information becomes available.

C. Parameter Speciation

Total / Total Recoverable Metals

For standards based upon the total and total recoverable methods of analysis, the limitations are based upon the same method as the standard.

Dissolved Metals / Potentially Dissolved

For metals with aquatic life-based dissolved standards, effluent limits and monitoring requirements are typically based upon the potentially dissolved method of analysis, as required under Regulation 31, Basic Standards and Methodologies for Surface Water. Thus, effluent limits and/or monitoring requirements for these metals will be prescribed as the “potentially dissolved” form.

VII. ADDITIONAL TERMS AND CONDITIONS

A. **Monitoring**

Effluent Monitoring – Effluent monitoring will be required as shown in the permit document. Refer to the permit for locations of monitoring points. Monitoring requirements have been established in accordance with the frequencies and sample types set forth in the Baseline Monitoring Frequency, Sample Type, and Reduced Monitoring Frequency Policy for Industrial and Domestic Wastewater Treatment Facilities. This policy includes the methods for reduced monitoring frequencies based upon facility compliance as well as for considerations given in exchange for instream monitoring programs

initiated by the permittee. Table VI-2 shows the results of the reduced monitoring frequency analysis for Permitted Feature 001A and 001B, Limit Set Town of Hayden, based upon compliance with the previous permit.

Based upon the reduced monitoring frequency analysis for Permitted Feature 001A and 001B, Limit Set Town of Hayden shown in Table VI-2, the permittee is not eligible for reduced monitoring for ammonia due to violations of the previous permit. The permittee is eligible for a 3 level reduction in monitoring from the baseline frequency of monthly for potentially dissolved selenium, however the previous permit requirements for selenium monitoring were already set to the 3 level reduction frequency of quarterly. Therefore, the monitoring frequency for potentially dissolved selenium will remain at quarterly.

Table VI-2 – Monitoring Reduction Evaluation

| <i>Parameter</i> | <i>Proposed Permit Limit</i> | <i>Average of 30-Day (or Daily Max) Average Conc.</i> | <i>Standard Deviation</i> | <i>Long Term Characterization (LTC)</i> | <i>Reduction Potential</i> |
|--|------------------------------|---|---------------------------|---|----------------------------|
| <i>NH₃ as N, Tot (mg/l)</i> | <i>2</i> | <i>18</i> | <i>7</i> | <i>32</i> | <i>None</i> |
| <i>Se, Dis (µg/l)</i> | <i>4.6</i> | <i>0.7</i> | <i>0.67</i> | <i>2.04</i> | <i>3 Levels</i> |

B. Reporting

1. Discharge Monitoring Report – The Town of Hayden facility must submit Discharge Monitoring Reports (DMRs) on a monthly basis to the Division. These reports should contain the required summarization of the test results for all parameters and monitoring frequencies shown in Part I.A.2 of the permit. See the permit, Part I.D for details on such submission.
2. Special Reports – Special reports are required in the event of an upset, bypass, or other noncompliance. Please refer to Part II.A. of the permit for reporting requirements. As above, submittal of these reports to the US Environmental Protection Agency Region VIII is no longer required.

C. Signatory and Certification Requirements

Signatory and certification requirements for reports and submittals are discussed in Part I.D.8. of the permit.

D. Compliance Schedules

The following compliance schedules are included in the permit. See Part I.B of the permit for more information.

1. Total Ammonia compliance schedule – Time is given to complete planned construction of the proposed outfall 003A which will discharge directly to the Yampa River. The Town of Hayden has already received funding for construction (November 2012) of the new outfall, and will begin construction in the year of 2015. The Division received a letter from the permittee, dated October 2, 2014, outlining the expected timeline for completion of construction. Therefore, the Division provided until 12/31/2015 for the facility to become in compliance with the new limitations.

All information and written reports required by the following compliance schedules should be directed to the Permits Section for final review unless otherwise stated.

E. Economic Reasonableness Evaluation

Section 25-8-503(8) of the revised (June 1985) Colorado Water Quality Control Act required the Division to "determine whether or not any or all of the water quality standard based effluent limitations are reasonably related to the economic, environmental, public health and energy impacts to the public and affected persons, and are in furtherance of the policies set forth in sections 25-8-192 and 25-8-104."

The Colorado Discharge Permit System Regulations, Regulation No. 61, further define this requirement under 61.11 and state: "Where economic, environmental, public health and energy impacts to the public and affected persons have been considered in the classifications and standards setting process, permits written to meet the standards may be presumed to have taken into consideration economic factors unless:

- a. A new permit is issued where the discharge was not in existence at the time of the classification and standards rulemaking, or
- b. In the case of a continuing discharge, additional information or factors have emerged that were not anticipated or considered at the time of the classification and standards rulemaking."

The evaluation for this permit shows that the Water Quality Control Commission, during their proceedings to adopt the Classifications and Numeric Standards for Upper Colorado River Basin and North Platte River (Planning Region 12), considered economic reasonableness.

Furthermore, this is not a new discharger and no new information has been presented regarding the classifications and standards. Therefore, the water quality standard-based effluent limitations of this permit are determined to be reasonably related to the economic, environmental, public health and energy impacts to the public and affected persons and are in furtherance of the policies set forth in Sections 25-8-102 and 104. If the permittee disagrees with this finding, pursuant to 61.11(b)(ii) of the Colorado Discharge Permit System Regulations, the permittee should submit all pertinent information to the Division during the public notice period.

Jennifer Charles
10/16/2014

VIII. REFERENCES

- A. Colorado Department of Public Health and Environment, Water Quality Control Division Files, for Permit Number CO0040959.
- B. "Design Criteria Considered in the Review of Wastewater Treatment Facilities", Policy 96-1, Colorado Department of Public Health and Environment, Water Quality Control Commission, April 2007.
- C. Basic Standards and Methodologies for Surface Water, Regulation No. 31, Colorado Department of Public Health and Environment, Water Quality Control Commission, effective January 31, 2013.

- D. Classifications and Numeric Standards for Upper Colorado River Basin and North Platte River (Planning Region 12), Regulation No. 33, Colorado Department of Public Health and Environment, Water Quality Control Commission, effective December 31, 2014.
- E. Colorado Discharge Permit System Regulations, Regulation No. 61, Colorado Department of Public Health and Environment, Water Quality Control Commission, effective January 30, 2012.
- F. Regulations for Effluent Limitations, Regulation No. 62, Colorado Department of Public Health and Environment, Water Quality Control Commission, effective July 30, 2012.
- G. Pretreatment Regulations, Regulation No. 63, Colorado Department of Public Health and Environment, Water Quality Control Commission, effective April 01, 2007.
- H. Biosolids Regulation, Regulation No. 64, Colorado Department of Public Health and Environment, Water Quality Control Commission, effective June 30, 2014.
- I. Colorado River Salinity Standards, Regulation No. 39, Colorado Department of Public Health and Environment, Water Quality Control Commission, effective August 30, 1997.
- J. Section 303(d) List of Water Quality Limited Segments Requiring TMDLs, Regulation No 93, Colorado Department of Public Health and Environment, Water Quality Control Commission, effective March 30, 2012.
- K. Colorado's Section 303(d) List of Impaired Waters and Monitoring and Evaluation List, Regulation No 93, Colorado Department of Public Health and Environment, Water Quality Control Commission, effective March 30, 2012.
- L. Antidegradation Significance Determination for New or Increased Water Quality Impacts, Procedural Guidance, Colorado Department of Public Health and Environment, Water Quality Control Division, effective December 2001.
- M. Memorandum Re: First Update to (Antidegradation) Guidance Version 1.0, Colorado Department of Public Health and Environment, Water Quality Control Division, effective April 23, 2002.
- N. Determination of the Requirement to Include Water Quality Standards-Based Limits in CDPS Permits Based on Reasonable Potential, Policy Number CW-1, Colorado Department of Public Health and Environment, Water Quality Control Division, effective November 18, 2013.
- O. The Colorado Mixing Zone Implementation Guidance, Colorado Department of Public Health and Environment, Water Quality Control Division, effective April 2002.
- P. Baseline Monitoring Frequency, Sample Type, and Reduced Monitoring Frequency Policy for Domestic and Industrial Wastewater Treatment Facilities, Water Quality Control Division Policy WQP-20, May 1, 2007.
- Q. Implementing Narrative Standards in Discharge Permits for the Protection of Irrigated Crops, Water Quality Control Division Policy WQP-24, March 10, 2008.

- R. Implementing Narrative Standard for Toxicity in Discharge Permits Using Whole Effluent Toxicity (WET) Testing, Colorado Department of Public Health and Environment, Water Quality Control Division Policy Permits-1, September 30, 2010.
- S. Policy for Conducting Assessments for Implementation of Temperature Standards in Discharge Permits, Colorado Department of Public Health and Environment, Water Quality Control Division, Policy Number WQP-23, effective July 3, 2008.
- T. Permit Compliance Schedules, Colorado Department Public Health and Environment, Water Quality Control Division Policy Number CW-3, effective March 4, 2014.
- U. Procedural Regulations for Site Applications for Domestic Wastewater Treatment Works, Regulation No. 22, Colorado Department of Public Health and Environment, Water Quality Control Commission, effective September 30, 2009.
- V. Regulation Controlling discharges to Storm Sewers, Regulation No. 65, Colorado Department of Public Health and Environment, Water Quality Control Commission, effective May 30, 2008.

Jennifer Charles
10/16/2014

IX. PUBLIC NOTICE COMMENTS

The public notice period was from October 17, 2014 to November 17, 2014. No comments were received during the public notice period.

Since the time of Public Notice, the Division has further evaluated the land (watering) application at the facility. This land application discharge will be covered under an alternative permitting mechanism (either a Notice of Authorization under Regulation 84 or a groundwater discharge permit). Discharges associated with land application are not authorized under this permit.